No. 200300068

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Cornell Agricultural Experiment Station, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE VARIETY. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Richland'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty ninth day of April, in the year two thousand three.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. ***Include form number and date on all reproductions***

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

MAH 4-24-03

1. NAME OF OWNER
Cornell Research Foundation, INC.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
NY88024-117

3. VARIETY NAME
Richland

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
20 Thornwood Drive, Suite 105
Ithaca, NY 14850 USA

5. TELEPHONE *(include area code)*
607-257-1081

6. FAX *(include area code)*
607-257-1015

FOR OFFICIAL USE ONLY

PVPO NUMBER
200300068

FILING DATE
12/24/2003

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Non-profit Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
New York

9. DATE OF INCORPORATION
1930

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Mark E. Sorrells
Department of Plant Breeding
240 Emerson Hall
Cornell University
Ithaca, NY 14853

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 2705.00
DATE 12/20/02

CERTIFICATION FEE:
$ 432.00
DATE 4/23/2003

11. TELEPHONE *(Include area code)*
607-255-1665

12. FAX *(Include area code)*
607-255-6683

13. E-MAIL
MES12@cornell.edu

14. CROP KIND *(Common Name)*

15. GENUS AND SPECIES NAME OF CROP
Triticum aestivum

16. FAMILY NAME *(Botanical)*
Triticeae

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☒ NO

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of Variety
d. ☐ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☒ Filing and Examination Fee ($2,705), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *See Section 83(a) of the Plant Variety Protection Act)*
☒ YES *(If "yes", answer items 20 and 21 below)* ☐ NO *(If "no", go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? ☒ YES ☐ NO
IF YES, WHICH CLASSES? ☒ FOUNDATION ☐ REGISTERED ☒ CERTIFIED

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☒ YES ☐ NO
IF YES, SPECIFY THE NUMBER 1,2,3, *etc.* ☒ FOUNDATION ☐ REGISTERED ☒ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☒ YES Attached ☐ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER
Richard S. Cahoon

NAME *(Please print or type)*
Richard S. Cahoon

CAPACITY OR TITLE
Vice President

DATE
Dec. 18/02

SIGNATURE OF OWNER

NAME *(Please print or type)*

CAPACITY OR TITLE

DATE

#22.

Records of Release Sale and Marketing of Richland

9/25/00 Seed was transferred from breeder to New York Seed Improvement Project (NYSIP). Shipped 128 lb. NY 88024-117 Breeder seed to Hopkins Farm, Pittsford, NY for use as planting stock. No commercial sale.

10/3/01 NYSIP invoiced Agriculver, Inc for 60.8 bushels NY 88024-117 (Breeder Approved). Of this amount, 48 Bu were retained by NYSIP and used as planting stocks at Hopkins Farm, and 2 Bu were stored at NYSIP as reserve. No commercial sale.

10/30/02 NYSIP invoiced Agriculver, Inc. for 918 bushels of Foundation Richland. Of this, 50 Bu was used as planting stock, 25 Bu was held as reserve. The remainder was transferred to Agriculver.

September 1, 2002 Agriculver down graded an undetermined quantity of Richland to certified and sold this seed commercially.

In October, 2002, 1 bushel of Richland was transferred to Genesis Seeds for testing purposes in Canda.

No commercial seed sales occurred prior to September, 2002.

Plant Variety Protection Application
Richland Soft White Winter Wheat

Exhibit A. Origin and Breeding History of Richland Soft White Winter Wheat

Genealogy:

The pedigree of Richland is Houser/Kleiber//White wheat 3 way cross composite. Richland was a selection from a composite population of 3-way crosses composed of the following crosses: 79052-Kleiber (Poland)/Houser//Houser; 79053-Houser//Kleiber (Poland)/Houser; 79054-Houser//Houser/Kleiber (Germany); 79055-Houser/Kleiber (Germany)//Houser; 79056-Houser//Houser/Kleiber (Poland); 79057-Houser/Kleiber (Poland)//Houser; 59076-Kleiber (Poland)/Houser//Geneva; 59077-Houser/Kleiber (Poland)//Geneva. This composite was designated NY88024.

Selection and Multiplication:

In 1988, seed from the crosses described above were bulked, designated NY88024, and fall planted in early generation plot 686. In 1989, all seed were harvested (302grams) and then fall planted in early generation plot 661. In 1990, all seed was harvested, screened for large plump seed, and then 400 grams were planted in early generation plot 620. In 1991, all seed was harvested, screened for large plump seed, and then 400 grams were planted in early generation plot 607. In 1992, 200 grams were sampled from the harvested plot and planted in the F5 plot 550. In 1993, single spikes were selected for short stature, plump, white seed, and 17 were selected for planting in headrow plot 50. In 1994, 2 headrows were selected for short stature, uniformity, and freedom from diseases. These were planted in our screening nursery without additional selection. In 1995, screening nursery plot no. 185 was selected for winter survival, plant height and freedom from diseases. Seed from that plot was planted in the Cornell Small Grains Winter Wheat Master Nursery in plot number 7331 for 1996 evaluation of grain yield, test weight, lodging resistance, chaff color, absence of awns, and resistance to powdery mildew. Seed from plot 7331 was again planted in the Cornell Small Grains Winter Wheat Master Nursery in plot number 9117 for 1997 evaluation of the same traits. In the fall of 1997, this line was designated NY88024-117 and seed from that plot was used for the 1997-98 Cornell Soft White Winter Wheat Regional Trial where it has been evaluated each year to the present. It was tested under the name NY88024-117 until 2002 when it was named Richland. In 2000, seed from our

regional trial was used to enter Richland in the Uniform Eastern Soft White Winter Wheat Nursery were it has been tested each year to the present.

Seed from our 2000 seed increase was used directly as the breeder seed in 2001 for a breeder seed increase block that was grown on the Hopkins Farm and rogued for plant type and uniformity.

Year	Characters Selected
1990	Large plump seed
1991	Large plump seed
1992	Large plump seed
1993	short stature, plump, white seed
1994	short stature, uniformity, and freedom from diseases
1995	winter survival, plant height and freedom from diseases
1996	Chaff color, awnlessness, grain yield, test weight, lodging resistance, winter hardiness, sprouting resistance.
1997	Chaff color, awnlessness, grain yield, test weight, lodging resistance, winter hardiness, sprouting resistance.

Uniformity and Stability:

The original breeder seed lots were extensively rogued for offtypes and variants in 2000. One foundation seed field was heavily rogued by NY Seed Improvement Program employees in 2001. Following that roguing, no off-types or variants were observed in at least 10 counts of 500 heads per count. In 2002, four fields totaling 19 acres were heavily rogued and harvested as Foundation Seed. Occasional awned spikes were observed but they were too few to show up in head counts (less than 0.01%). The frequency of variants is less than 0.01% and can be verified by examination of the records of the New York Seed Improvement Certified Seed Program. This variety has been uniform and stable for at least 3 generations.

Type and Frequency of Variants:

Richland is true breeding and stable with no variants occurring more frequently than 0.01% These data may be verified from records maintained by the Cornell Small Grains Project and the New York Seed Improvement Program, Dept. of Plant Breeding, 252 Emerson Hall, Cornell Univ., Ithaca, NY 14853.

Exhibit B. Statement of Distinctiveness

Richland Soft White Winter Wheat

Richland is most similar to Geneva in morphological traits, lodging resistance, prevalent diseases and plant height. Richland can be most clearly distinguished from Geneva by molecular markers.

At the molecular level, Richland can be distinguished from Geneva, using 2 molecular markers. The first is amplified using primers wms493 producing a 200 bp fragment for Richland and a 140 bp fragment for Geneva (Figure 1.). The second marker uses wms533 primers to PCR-amplify DNA fragments of 110, 150, and 160 bp for Richland and 118 bp for Geneva. Protocols and primer information are published in Roder et al. (1998).

The table below compares performance of Richland to other varieties adapted to this region and grown commercially in recent years and is only provided for general information.

Richland Performance Summary

	Grain Yield (kg/h)	Test Weight (kg/hl	Lodging 0-9	Winter Survival	Heading Date	Head Blight	Preharvest Sprouting	Height cm	WSBMV Rating	WSSMV Rating
Entry	5 Year	5 Yr	2 Yr	%	2 Yr	%	0-9	2 Yr	3Yr	3Yr
Houser	4427	73.8	1.8	95	6/7	4.0	4.3	94	R	MS
Geneva	4739	78.1	1.9	98	6/3	5.7	4.1	97	R	R
Caledonia	5115	77.0	1.0	98	6/4	7.6	3.3	89	R	R
Cayuga	4480	80.2	2.6	97	6/6	3.3	1.2	108	R	R
Richland	5055	78.1	1.6	98	6/5	6.3	3.4	96	R	R

Roder, M.S., Korzun, V., Wendehake, K., Plaschke, J., Tixier, M.H., Leroy, P., and Ganal, M.W. (1998) A microsatellite map of wheat. Genetics 149:2007-2023.

Milling and Baking Quality

Copies of the milling and baking reports from the USDA Soft Wheat Quality Laboratory in Wooster, OH for 2000, and 2001 are attached.

2003000688

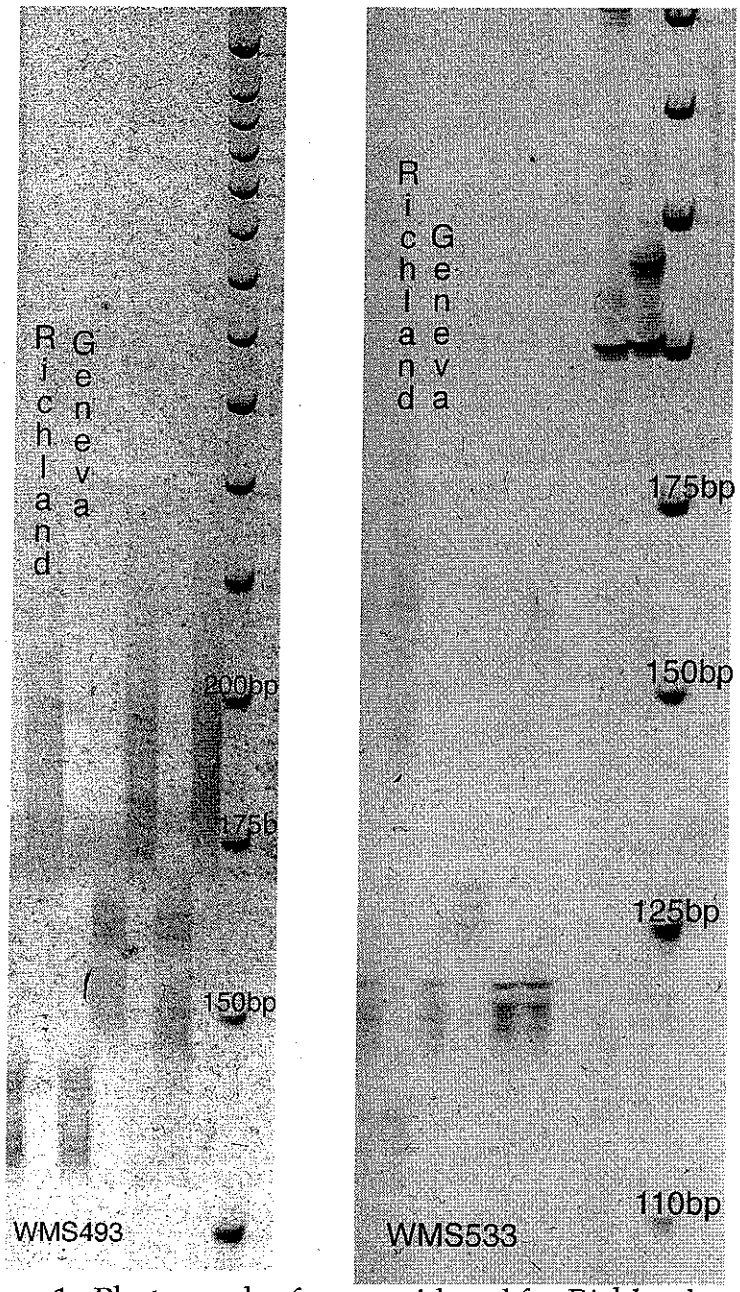

Figure 1. Photograph of acryamide gel for Richland and Geneva using WMS493 and WMS533 primers. The right lane contains the fragment size markers.

Exhibit C (W

REPRODUCE LOCALLY. Include form number and date on all reproductions.

Form Approved - OMB No. 058

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT
(Whe

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S)

Cornell Research Foundation

ADDRESS (Street and No. or RD No., City, State, and Zip Code)

20 Thornwood Drive, Suite 105
Ithaca, NY 14853 USA

FOR OFFICIAL USE ONLY

PVPO NUMBER 200300068

VARIETY NAME

TEMPORARY OR EXPERIMENTAL DESIGNATION

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. [0][9] or [0][9]) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:_____

Please answer all questions for your variety; lack of response may delay progress of your application

1. KIND:

[1]

1=Common
2=Durum
3=Club
4=Other (SPECIFY) : _____

2. VERNALIZATION:

[2]

1=Spring
2=Winter
3=Other (SPECIFY) : _____

3. COLEOPTILE ANTHOCYANIN:

[2] 1 = Absent 2 = Present

4. JUVENILE PLANT GROWTH:

[1] 1 = Prostrate 2 = Semi-erect 3 = Erect

5. PLANT COLOR (boot stage):

[1]

1 = Yellow-Green
2 = Green
3 = Blue-Green

6. FLAG LEAF (boot stage):

[1] 1 = Erect
2 = Recurved

[2] 1 = Not Twisted
2 = Twisted

[2] 1 = Wax Absent
2 = Wax Present

7. EAR EMERGENCE:

[2][5][4] Number of Days (Average)

[0][2] Number of Days ~~Earlier~~ Later Than Geneva *

Same as _____ *

7

8. ANTHER COLOR:

[1] 1 = Yellow
2 = Purple

9. PLANT HEIGHT (from soil to top of head, excluding awns):

[0][9][3] cm (Average)

[ ][ ] cm Taller Than _____ *

Same as Geneva _____ *

[ ][ ] cm Shorter Than _____ *

10. STEM:

A. ANTHOCYANIN

[1] 1= Absent
2 = Present

B. WAXY BLOOM

[2] 1 = Absent
2 = Present

C. HAIRINESS
(last internode of rachis)

[2] 1 = Absent
2 = Present

D. INTERNODE

[1] 1 = Hollow 2 = Semi-solid 3 = Solid

[4] Number of Nodes

E. PEDUNCLE

[1] 1 = Erect 2 = Recurved 3 = Semi-erect

[3][6] cm Length

F. AURICLE

[1] Anthocyanin 1 = Absent 2 = Present

[2] Hair 1 = Absent 2 = Present

11. HEAD (at Maturity):

A. DENSITY 39 mm

[3] 1 = Lax
2 = Middense (Laxidense)
3 = Dense

B. SHAPE

[1] 1 = Tapering
2 = Strap
3 = Clavate
4 = Other (SPECIFY): _____

C. CURVATURE

[2] 1 = Erect
2 = Inclined
3 = Recurved

D. AWNEDNESS

[3] 1 = Awnless
2 = Apically Awnletted
3 = Awnletted
4 = Awned

12. GLUMES (at Maturity):

A. COLOR

[2]
1 = White
2 = Tan
3 = Other (SPECIFY) : _____

B. SHOULDER

[4]
1 = Wanting 2 = Oblique
3 = Rounded 4 = Square
5 = Elevated 6 = Apiculate
7 = Other (SPECIFY):_____

C. SHOULDER WIDTH

[3]
1 = Narrow
2 = Medium
3 = Wide

D. BEAK

[1]
1 = Obtuse
2 = Acute
3 = Acuminate

E. BEAK WIDTH

[2]
1 = Narrow
2 = Medium
3 = Wide

F. GLUME LENGTH

[2]
1 = Short (ca. 7mm)
2 = Medium (ca. 8mm)
3 = Long (ca. 9mm)

G. WIDTH

[3]
1 = Narrow (ca. 3mm)
2 = Medium (ca. 3.5mm)
3 = Wide (ca. 4mm)

13. SEED

A. SHAPE

[1]
1 = Ovate
2 = Oval
3 = Elliptical

B. CHEEK

[1]
1 = Rounded
2 = Angular

C. BRUSH

[1]
1 = Short
2 = Medium
3 = Long

[1]
1 = Not Collared
2 = Collared

D. CREASE

[1]
1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

[1]
1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

E. COLOR

[1]
1 = White
2 = Amber
3 = Red
4 = Other (SPECIFY): _____

F. TEXTURE

[2]
1 = Hard
2 = Soft
3 = Other (SPECIFY): _____

G. PHENOL REACTION (*see instructions*):

[ ]
1 = Ivory
2 = Fawn
3 = Light Brown
4 = Dark Brown
5 = Black

H. SEED WEIGHT

[3][5] g/1000 seed (Whole number only)

I. GERM SIZE

[1]
1 = Small
2 = Midsize
3 = Large

14. Disease : (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

[0]	Stem Rust *(Puccinia graminis* f. sp. *tritici)*	[0]	Leaf Rust *(Puccinia recondita* f. sp. *tritici)*
[0]	Stripe Rust *(Puccinia striiformis)*	[2]	Loose Smut *(Ustilago tritici)* Local races
[0]	Tan Spot *(Pyrenophora tritici-repentis)*	[0]	Flag Smut *(Urocystis agropyri)*
[0]	Halo Spot *(Selenophoma donacis)*	[0]	Common Bunt *(Tilletia tritici* or *T. laevis)*
[3]	*Septoria nodorum* (Glume Blotch)	[0]	Dwarf Bunt *(Tilletia controversa)*
[0]	*Septoria avenae* (Speckled Leaf Disease)	[0]	Karnal Bunt *(Tilletia indica)*
[0]	*Septoria tritici* (Speckled Leaf Blotch)	[2]	Powdery Mildew *(Erysiphe graminis* f. sp. *tritici)* Local races
[1]	Scab (*Fusarium* spp.)	[0]	"Snow Molds"
[0]	"Black Point" (Kernel Smudge)	[0]	Common Root Rot *(Fusarium, Cochliobolus* and *Bipolaris* spp.*)*
[1]	Barley Yellow Dwarf Virus (BYDV)	[0]	Rhizoctonia Root Rot *(Rhizoctonia solani)*
[2]	Soilborne Mosaic Virus (SBMV)	[0]	Black Chaff *(Xanthomonas campestris* pv. *translucens)*
[2]	Wheat Yellow (Spindle Streak) Mosaic Virus	[0]	Bacterial Leaf Blight *(Pseudomonas syringae* pv. *syringae)*
[0]	Wheat Streak Mosaic Virus (WSMV)	[ ]	Other (SPECIFY) _____
[ ]	Other (SPECIFY) _____	[ ]	Other (SPECIFY) _____
[ ]	Other (SPECIFY) _____	[ ]	Other (SPECIFY) _____
[ ]	Other (SPECIFY) _____	[ ]	Other (SPECIFY) _____

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

[0]	Hessian Fly *(Mayetiola destructor)*	[ ]	Other (SPECIFY) _____
[0]	Stem Sawfly *(Cephus* spp.)	[ ]	Other (SPECIFY) _____
[0]	Cereal Leaf Beetle *(Oulema melanopa)*	[ ]	Other (SPECIFY) _____

15. INSECT: ***Continued*** **(0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)**

PLEASE SPECIFY BIOTYPE (where needed) 200300068

0	**Greenbug** ***(Schizaphis graminum)***	☐	**Other (SPECIFY)** _____
0	**Aphids**	☐	**Other (SPECIFY)** _____

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

ADVANCED NURSERY EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY
2000 CROP

MARK SORRELLS
ITHACA, NEW YORK
UEWN ENTRIES

STD = #1669, AC RON

LAB NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMBINED QUALITY SCORE	MICRO T.W. LB/BU	SOFT. EQUIV	FLOUR YIELD	FLOUR PROT.	MICRO AWRC	COOKIE DIAM.	TOP GR.
****	STANDARD	100.0 A	100.0 A	100.0 A	58.8	57.8	70.5	6.71	57.6	18.3	7
1666	1 Yorkstar	106.2 A	110.0 A	106.2 A	58.1	60.8	71.7	6.91	56.355	19.57	8
1667	2 Augusta	107.1 A	110.0 A	107.1 A	58.9	61.0	72.2	6.95	55.932	18.73	6
1668	3 Harus	96.5 B	99.0 B	96.5 B	60.0	54.1 *	70.1	7.92	56.609	18.3	6
1669	4 AC Ron	100.0 A	100.0 A	100.0 A	58.8	57.8	70.5	6.71	57.586	18.3	7
1670	5 Caledonia	106.1 A	108.0 A	106.1 A	60.5	58.3	72.4	7.59	56.485	19.08	6
1671	6 Superior	105.0 A	106.6 A	105.0 A	60.1	56.9	72.5	7.31	55.575	18.72	7
1672	7 AC McKinnon	104.1 A	108.4 A	104.1 A	59.1	58.8	71.4	6.88	56.399	18.6	7
1673	8 NY85020-395	106.4 A	108.8 A	106.4 A	60.1	59.1	72.8	7.19	56.083	19.1	6
1674	9 AC Essex	106.2 A	109.3 A	106.2 A	58.8	59.6	72.8	7.03	55.675	19.06	7
1675	10 AC Pacer	106.4 A	110.0 A	106.4 A	58.3	60.3	73.3	6.86	55.794	18.57	7
1676	11 TW96202	107.2 A	110.0 A	107.2 A	57.1 *	62.4	72.5	6.74	55.146	18.85	8
1677	12 TW97109	100.4 A	107.2 A	100.4 A	57.8	59.0	70.6	7.38	57.17	18.8	6
1678	13 TW97205	100.2 A	95.2 B	95.2 B	59.1	56.2	70.8	7.69	58.164	18.21	5
1679	14 NY66003-106	109.4 A	94.6 C	94.6 C	60.9	64.8	72.1	6.69	62.689 Q	18.95	7
1680	15 D6234	102.8 A	101.1 A	101.1 A	61.8	55.0	71.4	7.78	58.053	18.77	6
1681	16 TW97225	104.5 A	109.3 A	104.5 A	58.5	62.3	71.0	6.72	56.887	18.82	8
1682	17 TW97227	107.5 A	110.0 A	107.5 A	59.4	61.3	72.2	7.48	56.172	18.93	7
1683	18 TW97276	103.0 A	98.4 B	98.4 B	59.0	55.7	71.6	7.10	57.472	18.3	5
1684	19 NY85020-97	107.7 A	109.7 A	107.7 A	59.5	61.5	73.2	6.92	56.742	18.78	7
1685	20 NY88024-117	106.9 A	98.1 B	98.1 B	62.2	58.4	72.3	7.70	60.586 *	19.1	5
1686	21 NY87048W-7388	97.0 B	103.4 A	97.0 B	61.8	59.7	69.1 *	7.41	58.135	18.44	5
1687	22 D6277	106.0 A	106.1 A	106.0 A	62.0	57.1	71.8	7.61	56.933	18.75	6
1688	23 D8006	105.3 A	100.8 A	100.8 A	60.2	57.4	73.3	7.51	59.095	18.65	6
1689	24 D8049	108.7 A	106.3 A	106.3 A	59.2	65.9	73.7	7.30	58.078	18.78	6
1690	25 D8181	100.8 A	64.0 F	64.0 F	59.1	51.1 Q	73.7	8.04	58.603	16.98 Q	3
1691	26 TW005-059	103.7 A	97.4 B	97.4 B	62.4	53.4 *	72.4	8.25	58.933	18.77	4

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21

2001 CROP

ADVANCED NURSERY EVALUATION
FOR SOFT WHEAT MILLING AND BAKING QUALITY

MARK SORRELLS
ITHACA, NY
UEWN

STD = #1352, AUGUSTA

LAB NO.		ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		COMBINED QUALITY SCORE		MICRO T.W. LB/BU		SOFT. EQUIV. %		FLOUR YIELD %		FLOUR PROT. %		MICRO AWRC %		COOKIE DIAM. CM.		TOP GR.	LACTIC ACID RET'N
****		STANDARD	100.0	A	100.0	A	100.0	A	61.5		51.0		71.4		8.46		56.4		18.19		4	89.7
1351	1501	NY85020-97	101.2	A	86.5	D	86.5	D	62.8		50.5		71.7		9.28	*	56.702		17.6	Q	3	81.1
1352	1502	Augusta	100.0	A	100.0	A	100.0	A	61.5		51.0		71.4		8.45		56.4		18.19		4	89.7
1353	1503	NY88024-117	103.9	A	89.7	D	89.7	D	62.1		57.2		71.5		9.29	*	59.293	*	17.93	*	4	106.0
1354	1504	Superior	103.6	A	90.1	C	90.1	C	62.2		52.0		72.1		8.11		55.454		17.54	Q	3	92.5
1355	1505	AC ESSEX (H649W-5)	102.5	A	90.6	C	90.6	C	61.8		49.9		72.3		8.42		56.069		17.75	*	3	91.7
1356	1506	TW060-099	104.6	A	95.7	B	95.7	B	61.6		53.5		72.1		8.15		55.586		17.76	*	4	92.0
1357	1507	Yorkstar	98.6	B	97.7	B	97.7	B	61.7		51.5		71.0		8.42		55.77		17.97		5	84.3
1358	1508	AC Mountain(H649W-14	104.9	A	94.4	C	94.4	C	61.8		51.5		72.6		8.17		55.812		17.82	*	4	94.1
1359	1510	Harus	94.1	C	95.9	B	94.1	C	62.2		50.3		70.0	*	9.19	*	55.396		17.91	*	4	87.9
1360	1511	D6234	95.9	B	89.8	D	89.8	D	62.8		50.8		70.3	*	9.03		56.731		17.75	*	3	78.2
1361	1512	NY87048W-7388	91.4	C	84.5	E	84.5	E	63.2		54.2		68.5	Q	8.99		58.649	*	17.6	Q	3	73.5
1362	1513	MacKinnon(PRC9308	95.3	B	93.0	C	93.0	C	62.7		51.1		70.1	*	8.97		55.731		17.76	*	5	91.3
1363	1514	Caledonia(Gen.Rs.	103.5	A	96.0	B	96.0	B	63.0		50.6		72.2		8.52		58.117	*	18.23		3	102.6
1364	1515	D9102	100.8	A	80.1	E	80.1	E	63.8		51.9		71.2		8.82		58.824	*	17.48	Q	3	100.2
1365	1516	D9070	99.2	B	97.0	B	97.0	B	61.5		52.9		70.9		8.67		57.169		18.04		4	101.7
1366	1517	TW004-093	92.5	C	80.9	F	80.9	F	62.9		44.6	Q	70.6	*	9.23	*	57.855		16.81	Q	3	101.7
1367	1518	D8006	105.8	A	86.6	D	86.6	D	62.8		51.3		72.9		8.99		57.733		17.69	Q	4	115.3

Exhibit E. Statement of the Basis of the Applicant's Ownership

Ownership

Richland Soft White Winter Wheat

The owner of Richland soft white winter wheat is the Cornell Research Foundation, Ithaca, NY. Richland was bred and tested by Dr. M. E. Sorrells while employed at Cornell University and by agreement, varieties developed are the property of the Cornell Research Foundation, Ithaca, NY.

INC.